ENGINEERING FORUM TELECONFERENCE MINUTES
March 7, 2001

TOPICS IN THIS MONTH'S MINUTES:

TECHNICAL TOPIC

SPRING MEETING

MISCELLANEOUS
1. HSRC/TSP Liaisons
2. In Situ Thermal Conference
3. Lead Contamination in Historic Buildings

TECHNICAL TOPIC[1]

Region 8 received a letter from a New England environmental consulting firm regarding a process used to "treat" utility manhole sediments (mostly lead contamination) in situ, using a spray precipitating agent which is claimed to stabilize lead contaminants. The "stabilized" soil is then removed and disposed of as non-hazardous.

Nancy Morlock (Region 8) inquired whether forum members have been involved with cases where companies have treated utility manhole sediments in situ. Was a RCRA permit required, or not? If not, was permit-exempt treatment conducted per 262.34 generator accumulation provisions, or per another provision?

Dave Reisman (NRMRL/Cinc.) responded with the following information on a chemical additive called LEADX™ that can be used to treat lead and other heavy metals in situ:

LEADX™

Technology Description

1. Introduction

LEADX™ is a chemical additive that was developed to treat material contaminated with lead or other heavy metals in situ. LEADX™ may be added directly to soil or incorporated into sandblasting materials or paint thinners. LEADX™ penetrates the contaminated material and chemically bonds with heavy metal contaminant to form an insoluble, non-leachable compound. The vendor claims that once bonded, the lead cannot be absorbed by plants or animals and is chemically rendered immobile. According to the vendor, it has been used in the following applications for the treatment of lead (D166976, p.2):

- Recycling of computer monitor or television cathode ray tubes (CRT) or other lead contaminated glass;
- In situ soil remediation;
- Lead paint removal and remediation; and
- Recycling of lead contaminated sludge.

---

[1]This technical topic discussion was conducted via e-mail, not during the actual call.

2. History and Stage of Development
LEADX™ was developed and is manufactured by Proactive Environmental Research and Development, Inc. (PERDI). PERDI indicates that patents are pending in the US for processing and treatment of CRT such as those used for displays in televisions and computer monitors. Patents are also pending in the US for the use of LEADX™ as an abrasive additive for sandblasting to immobilize lead from lead paint residue. LEADX™ is distributed Proactive Applied Solutions Corporation (PASCO). EnviroBest Corporation markets two paint removers containing LEADX™ called PR-40/LEADX™ and PR-40AF/LEADX™ (D166976, p. 2; D20236Y, p. 4 & 5).

3. Process Description
LEADX™ is a slightly-soluble granular chemical that may be added directly to contaminated soil or incorporated into paint thinners or sandblasting materials. The slightly-soluble LEADX™ penetrates the contaminated material. LEADX™ bonds with the lead or other heavy metals to form an insoluble, nonleachable compound such as hydropyromorphite. The vendor claims that once bonded, the lead cannot be absorbed by plants or animals and is chemically rendered immobile. According to the vendor, the reaction between the LEADX™ and the heavy metals occurs immediately upon contact (D166976, p.1; D19108M, p. 1; D193764, 1; D20236Y, p. 7).

EnviroBest Corporation produces PR-40/LEADX™ for the removal and immobilization of lead-based paints and PR-40 AF/LEADX™ for the treatment of lead-based paints under other types of paint. Both types of paint removers are sprayed on the wall, allowed to soak through the paint to the substrate, and removed using a power washer or scraper (D20236Y).

According to the vendor, LEADX™ has the following advantages:

- Stabilizes lead in abrasive waste forming a permanent, stable chemical bond;
- Passes the Toxicity Characteristic Leaching Procedure (TCLP) and Multiple Extraction Procedures (MEP);
- Is cost competitive with other disposal techniques;
- Has a neutral pH;
- Does not mask, dilute, or encapsulate lead debris;
- May be used wet or dry and has an unlimited shelf life; and
- Works with standard blasting and spraying equipment (D193764).

4. Involvement with Government Programs/Regulatory Acceptance
The demonstration of EnviroBest Corporation's PR-40/LEADX™ in Butte, Montana, was funded by the U.S. Environmental Protection Agency's (EPA's) Office of Research and Development and the U.S. Department of Energy (DOE). The City of Amarillo, Texas used LEADX™ as a sandblasting additive to remove lead from an elevated water storage tank (D20235X, p. 1; D20234W, p. 4).
Jim Harrington (NYSDEC) noted that New York has not been faced with the question before but would have severe reservations because of resuspension issues. Stabilization involves mixing of the contaminated soil with the stabilizing agent. Assuming the contaminated material is at the water/sediment interface, this mixing will cause the contaminated material to be resuspended into the water column. If the "sediment" is so deep that this could not happen, an argument can be made that you are not stabilizing sediment, but underlying soil in the saturated zone - which has been done before. However, even if the contamination is deep, you still will have to deal with suspension of sediment when the mixer enters and exits the sediment from the water column.

Gene Keepper (Region 6) has found some documents dealing with in situ phosphate treatment and will send a bibliography to Keith Arnold to be included in the minutes.

SPRING MEETING

The social outing to the San Diego Padres baseball game will take place on Tuesday night, May 8. Each forum will be responsible for obtaining their own baseball tickets. All forum members who plan to attend the game should tell Chet Janowski by April 13th so he can purchase the correct number of tickets.

Forum members should register for the conference with Diane Dopkin (301-589-5318 or diane.dopkin@emsus.com) and make their hotel reservations by April 11, 2001. When calling the hotel, registrants should mention the EPA TSP conference to get the government rate.

The co-chair election will be held on Monday, May 7. Each Region gets two votes.

Forum members who have not sent their signed participation agreements to the co-chairs should do so before the spring meeting.

On Tuesday morning, the Federal Facilities Forum will hold a break out session. The Ground Water Forum (GWF) will hold a break out session on Tuesday afternoon. Wednesday afternoon, GWF will meet with USGS off-site.

If any EF members have particular issues that they would like to discuss during the business sessions, they should send a list of those issues to the co-chairs.

Camille Hueni will distribute a tentative agenda for the spring meeting to the forum as soon as a draft is ready.

MISCELLANEOUS

HSRC/TSP Liaisons

Walt Kovalick (TIO) is looking to increase communication between the new Hazardous Substance Research Centers (HSRCs) and OSWER programs. To that end, he has asked the co-chairs (or other forum-designated representatives) to serve as liaisons between the centers and the programs. Their primary directive would be to facilitate the dissemination of information. Steve Kinser thinks this is an excellent opportunity to increase the forums' visibility and to gain an inside look into future research directions and issues. Ed Mead suggested contacting Dr. Dale Manty, the director of the HSRCs, for more information. Harry Ball (Region 9) and Frank Vavra (Region 3) agreed that the forum should seriously consider becoming involved in this activity. Frank suggested that the forum should respond favorably to Walt's request, then define the EF's role at the spring meeting. Camille Hueni will forward Walt's email to the forum; any members who have comments or ideas should respond to one of the co-chairs.

In Situ Thermal Conference

Jim Cummings (TIO) will be traveling to Region 6 in May to conduct an in situ thermal treatment seminar for RPMs. He is considering organizing a national workshop and developing a website for RPMs who work on wood treatment sites. This website would host a forum through which RPMs could collaborate on issues. Jim would like the EF to co-sponsor this initiative. Camille Hueni will ask Jim for more information about his request (e.g., if the meeting will be open only to RPMs working on wood treatment sites). Camille will distribute information on this request to the forum.

Lead Contamination in Historic Buildings

JoAnn Camacho (ERT/Edison) inquired about gentle, non-abrasive methods for removing lead from floors, walls, and girders in an historic building. The method used could not damage the structure in any way. Camille Hueni offered to send JoAnn the POC for lead contamination in Region 6. Any other ideas or suggestions should be sent directly to JoAnn.

Attendees

Ray Cody, Region 1 Sharon Hayes, Region 1

Chet Janowski, Region 1
Mark Granger, Region 2
Rich Ho, Region 2
Frank Vavra, Region 3
Jon Bornholm, Region 4
Tim Woolheater, Region 4
Camille Hueni, Region 6
Gene Keepper, Region 6
Steve Kinser, Region 7
Nancy Morlock, Region 8
Bill Rothenmeyer, Region 8
Harold Ball, Region 9
Cynthia Wetmore, Region 9

Ken Brown, NERL/Las Vegas
JoAnn Camacho, ERT/Edison
Ed Mead, USACE
Keith Arnold, EMS, Inc.